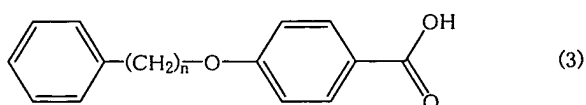


### Claims

1. A method for producing a compound represented by the formula (3):

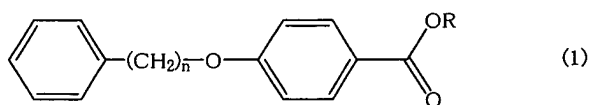


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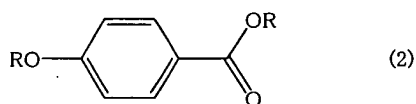
wherein n is an integer of 1 to 6, which method is characterized by the steps of

hydrolyzing a solution containing an ester compound represented by the formula (1):

10



wherein R is a lower alkyl group and n is an integer of 1 to 6, and a compound represented by the formula (2):



15

wherein R is as defined above,

adjusting the pH of the resulting solution to pH 4 to 8,

and then subjecting to phase separation to obtain an

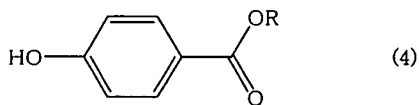
organic layer containing the carboxylic acid of formula

20

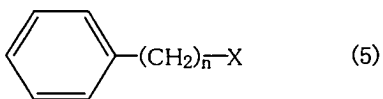
(3).

2. The method for producing a carboxylic acid compound according to claim 1, wherein the mixture containing the ester

compound represented by the formula (1) and the compound represented by the formula (2) is a reaction solution obtained by reacting an ester compound the formula (4)



5 wherein R represents a lower alkyl group, and a halogen compound represented by the formula (5):



wherein n represents an integer of 1 to 6 and X represents  
10 a halogen atom, in an organic solvent in the presence of a base.

3. The method for producing a carboxylic acid compound according to claim 2, wherein the mixture containing the ester compound represented by the formula (1) and the compound  
15 represented by the formula (2) is an organic layer obtained by mixing the reaction liquid obtained by reacting the ester compound represented by the formula (4) and the halogen compound represented by the formula (5) in the organic solvent in the presence of a base, water, and optionally a water-insoluble  
20 organic solvent; and conducting a liquid phase separation.

4. The method for producing a carboxylic acid compound according to claim 1, wherein n is 4 in the formula (1) of the ester compound.

5. The method for producing a carboxylic acid compound according to claim 2 or 3, wherein the reaction is conducted in an aprotic polar solvent.
- 5 6. The method for producing a carboxylic acid compound according to claim 5, wherein the aprotic polar solvent is N,N-dimethyl formamide, N,N-dimethyl acetamide, N-methyl-2-pyrrolidone or dimethyl sulfoxide.
- 10 7. The method for producing a carboxylic acid compound according to claim 2 or 3, wherein the halogen compound represented by the formula (5) is 4-phenyl-1-chlorobutane.